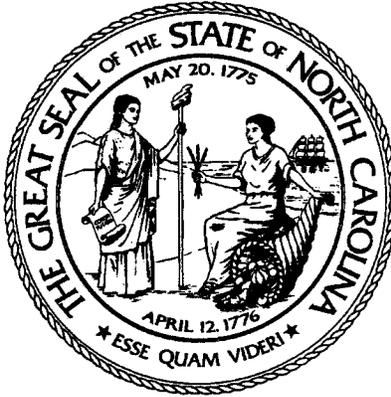


# LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS

Assessment Report  
for

## Well Contractors

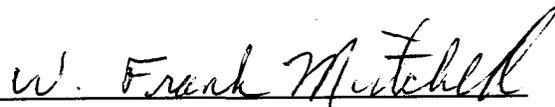
Senate Bill 261  
House Bill 251

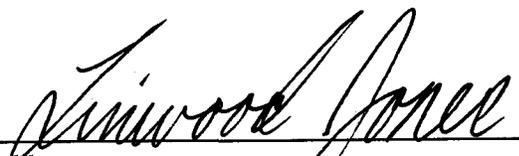


## LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS

May 19, 1997

The Legislative Committee on New Licensing Boards is pleased to release this assessment report on the licensing of well contractors. This report constitutes both the preliminary and final assessment report.

  
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Representative Frank Mitchell, Chairman

  
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Prepared by:  
Linwood Jones, Counsel

**LEGISLATIVE COMMITTEE ON NEW LICENSING BOARDS**

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**Counsel: Mr. Linwood Jones  
Mrs. Linda Attarian**

**90LLJ-0265H**

## PREFACE

The Legislative Committee on New Licensing Boards is a 9-member joint committee of the House and Senate created and governed by statute (Article 18A of Chapter 120 of the General Statutes). The primary purpose of the Committee is to evaluate the need for a new licensing board or the proposed licensing of previously unregulated practitioners by an existing board. The Committee has been in existence since 1985.

The Committee solicits written and oral testimony on each licensing proposal in carrying out its duty to determine whether the proposal meets the following criteria:

- (1) Whether the unregulated practice of the profession can substantially endanger the public health, safety, or welfare, and whether the potential for such harm is recognizable and not remote or dependent upon tenuous argument.
- (2) Whether the profession possesses qualities that distinguish it from ordinary labor.
- (3) Whether practice of the profession requires specialized skill or training.
- (4) Whether a substantial majority of the public has the knowledge or experience to evaluate the practitioner's competence.
- (5) Whether the public can effectively be protected by other means.
- (6) Whether licensure would have a substantial adverse economic impact upon consumers of the practitioner's good or services.

The Committee issues an assessment report on its findings and recommendations. The recommendation in the report is not binding on other committees considering the proposal.

## WELL CONTRACTORS

Well contracting involves the construction, installation, repair, alteration, or abandonment of a well. A person who undertakes one of these activities is a well contractor. Under Senate Bill 261 and House Bill 251, the well contractor, unless otherwise exempt, must be licensed by the North Carolina Well Contractors Certification Commission. The Commission, a 7-member panel appointed by the General Assembly (6 appointees) and the Governor (1 appointee), would be created within the Department of Environment, Health, and Natural Resources.

Anyone practicing as a well contractor since July 1, 1986 and either (1) registered with DEHNR since July 1, 1992 or (2) an employee of a company registered with DEHNR since July 1, 1992 would be licensed without examination. All others, unless exempt, would be required to meet the educational, experience, and examination requirements imposed by the Commission (*see proposed G.S. §87-98.7*). The existing registration law, which requires well contractors to register with DEHNR, would be repealed.

Improper well construction can lead to groundwater contamination, as pollutants such as pesticides, septic tank waste, and oil can seep through the well into the groundwater. More than one-half of all North Carolinians obtain their drinking water from groundwater. To ensure their safety, it is critical that well contractors demonstrate at least a minimum level of competence in well

construction. Contractors need to be familiar with drilling rigs and related equipment, the uses of different casings, well screens, drilling bits, and specialized tools, geologic formations, disinfection methods, and groundwater contamination. North Carolina law regulates well construction (*Article 7 of Chapter 87 of the General Statutes*), but these laws do not ensure the competency of well contractors. During the first half of this decade, DEHNR issued notices of violations covering more than 625 violations at nearly 500 different water supply wells throughout the State. Many of these wells had multiple violations.

The Legislative Committee on New Licensing Boards finds that the sponsors have met the six statutory criteria by which the Committee judges licensure proposals, as follows:

- (1) The unregulated practice of the profession can substantially harm or endanger the public health, safety, or welfare, and the potential for such harm is recognizable and not remote nor dependent upon tenuous argument.
- (2) The practice of the profession possesses qualities that distinguish it from ordinary labor.
- (3) The practice of the profession requires specialized skill and training.
- (4) A substantial majority of the public does not have the knowledge or experience to evaluate the practitioner's competence.
- (5) The public cannot be effectively protected by other means.

(6) Licensure would not have a substantial adverse economic impact upon consumers.

The Legislative Committee on New Licensing Boards recommends licensure of well contractors. This assessment report constitutes both the preliminary and the final assessment report for the licensing of well contractors. The report is based on the proposed licensing of well contractors, as set out in Senate Bill 261 and House Bill 251, the response to the Committee's questionnaire (attached), and testimony before the Committee on May 12, 1997.

# WELL CONTRACTORS

Department of Environment, Health and Natural Resources  
Responses to the Committee on New Licensing Boards  
House Bill 251, Senate Bill 261  
Well Contractors Certification

- (1) In what ways has the marketplace failed to regulate adequately the profession or occupation?

Improperly constructed wells will serve as sources or conduits of surface/near surface contaminants into the underground water reservoirs. Additionally, there are a number of specialized skills required to properly construct and repair wells. However, there is no presently existing licensing or certification board with the jurisdiction to ensure that those engaged in well contractor activities have the knowledge, skills and abilities necessary to properly provide these contractor services. In fact, under current state law, it is theoretically possible for any individual, regardless of age or skill level, to become registered as a well contractor in North Carolina.

- (2) Have there been any complaints about the regulated profession or occupation? Please give specific examples including (unless confidentiality must be maintained) complainant's names and addresses.

From 1990 through 1995, the state has, as a result of complaints and subsequent inspections, issued notices of violation covering more than 625 violations at almost 500 separate water supply wells. Many wells had multiple violations [e.g. well not grouted; no sanitary well seal; unsafe wellhead completion; well located too close to septic tank/drainfield or other waste sources; etc.] that resulted in a threat to the well owner and family [e.g. the presence of sediments, fecal coliforms, nitrates, pesticides and heating oils in the well]. Specific examples are given in the latter part of item (3) below.

- (3) In what ways has the public health, safety or welfare sustained harm, or is in imminent danger of harm, because of the lack of state regulation?

More than 50% of the citizens of North Carolina rely on groundwater as a source of their drinking water supply. Each of these must have a water supply well. Every citizen relying on an improperly constructed water supply well runs the risk of groundwater contamination and the associated health risks each time it rains or when there is a nearby leak or spill of pesticides, septic tank waste, heating oil, etc. As new wells are constructed by uncertified and potentially unqualified people, additional citizens are exposed to potential health risks.

If the contractors who construct wells do not have the necessary training, experience and equipment (and there are no minimum levels for any of the three), then the public will not be able to have:

- 1) A drinking water supply designed to be protective of human health;
  - 2) A longer-lived and more reliable source of potable drinking water.
- One of the primary reasons for the loss of use of a well or well

system is groundwater contamination. Contamination is often caused by the percolation of contaminated water, or chemicals, down beside the well casing;

- 3) Confidence that the well contractor, contracted with to provide a source of drinking water, is capable of delivering a well constructed according to established standards; and
- 4) Confidence that the well that is constructed will not have to be replaced (or extensively repaired) due to improper installation.

In addition to those instances where well related violations were serious enough to require the state to issue a notice of violation, there have been a number of cases where additional enforcement action was necessary. That additional enforcement action was necessary because the well contractor could not, or would not, repair the well to standards where it was no longer a threat to human health. A sampling of those cases are as follows:

<u>*Types of Violations</u>	<u>Well Owner Name</u>	<u>Address</u>
(1), (2)	John Smith	Gold Hill, NC
(1), (3)	Barbara Carpenter	Crouse, NC
(1)	Louie Jackson	Salisbury, NC
(1)	Paul Eudy	Concord, NC
(1)	Webster Hollar	Lenoir, NC
(1)	Kenneth Carron	Chocowinity, NC
(1)	Mary Freeole	Salisbury, NC
(1)	Sabrina Kincade	Salisbury, NC
(1)	Todd Arrowood	Vale, NC
(1), (2)	Eddie Hughes	Hickory, NC
(1)	Wm. McLaughlin	Concord, NC
(1), (2)	Farrel Houser	Lincolnton, NC
(1), (2)	Richard Harwell	Hickory, NC
(4)	Todd Johnson	Vale, NC
(1), (2)	Rick Crofts	Newton, NC
(1), (2)	Jesse Clark	Maiden, NC

\* Type of Well Violation-Key

- (1) Missing/insufficient/improper cement casing grout
- (2) Improper wellhead completion (no sanitary seal, cracked casing, improper sealing of casing/water-line joints)
- (3) High level of solids and/or coliform bacteria in well
- (4) Improper well abandonment that threatens drinking water supply.

- (4) Is there potential for substantial harm or danger by the profession or occupation to the public health, safety or welfare? How can this potential for substantial harm or danger be recognized?

The potential for substantial harm or danger to the public was summarized in the responses to items (1) and (3). Unfortunately, the public does not have enough technical knowledge in the critical areas (i.e. geology, hydrogeology, proper well construction and development, well disinfection, contamination concerns, and well vulnerability), in order to make a determination regarding contractor competence. Since the final product that is delivered is underground and unavailable for inspection without specialized testing equipment, the public must accept the word of the well contractor that the well has been installed

in a safe and legal fashion.

- (5) Has this potential harm or danger to the public been recognized by other states or the federal government through the licensing or certification process? Please list the other states and any applicable federal law (including citations).

The federal government has deferred to the states in the matter of well contractor licensing/certification. Approximately 70% of the States have recognized a need to license/certify those who engage in these activities. Those states include the following:

Arizona	Georgia	Maryland	New Jersey
Arkansas	Hawaii	Massachusetts	Mexico
California	Idaho	Minnesota	Oklahoma
Colorado	Illinois	Mississippi	Oregon
Connecticut	Indiana	Missouri	Pennsylvania
Delaware	Iowa	Montana	South Carolina
Florida	Kansas	Nebraska	Texas
Louisiana	Kentucky	Nevada	Virginia
		New Hampshire	Washington

- (6) What will be the economic advantage of certification be to the public?

Some of the economic benefits (as a result of having a contractor with requisite demonstrable training, experience and equipment) were outlined in the response to item (3). A summarization of benefits would be that:

- 1) The well owner will benefit in that fewer new wells and pumps will have to be paid for due to contamination resulting from inept well construction, development, and repair.
- 2) The public will benefit from reduced health concerns, and fewer associated health care costs, as a result of a safer drinking water supply.

- (7) What will be the economic disadvantages of licensing to the public?

It is anticipated that well drillers will pay a yearly certification fee of \$125.00 or less. A well contractor that constructs 50 wells per year would spread the cost among the well owners, thus increasing the cost to each owner of \$2.00 - \$3.00 per well. It is not unusual for drillers to construct more than 50 wells per year.

- (8) What will be the economic advantages of licensing to the practitioners?

The well contractors will benefit from increased business as the certification process weeds out those who lack the knowledge and skills required to be adequately performing the work.

- (9) What will be the economic disadvantages of licensing to the practitioners?

There should be no economic disadvantage to the majority of well contractors who have the requisite knowledge, skills and abilities. However, those who lack those skills will not be allowed to conduct well contractor activities until they have rectified those deficiencies.

- (10) Please give other potential benefits to the public of licensing that outweigh the potential harmful effects of licensure such as a decrease in the availability of practitioners and higher cost to the public.

The potential benefits versus potential harm are identified in the responses to items (1), (3), and (6).

- (11) Please detail the specific specialized skills or training that distinguish the occupation or profession from ordinary labor. How is each justified?

A number of specialized skills are required for well and pump contractors. Some of those skills and the adverse effects that can result from a lack of those skills, are as follows:

For Well Contractors:

- 1) familiarity with the operation and maintenance of drilling rigs and associated equipment;
- 2) familiarity with the advantages and disadvantages of the various well casings, well screens, drilling bits, specialized tools and circulation/well development fluids;
- 3) familiarity with the various geologic formations found in the state and the problems associated with drilling in each geologic environment;
- 4) familiarity with the proper methodologies to be used in the development and disinfection of wells; and
- 5) familiarity with the causes of contamination and the methodology to be used in order to best protect the well.

Lack of familiarity with these aspects of well drilling can result in the introduction of contamination into the water supply; misuse of well construction materials that are incompatible with the area geology or quality of the groundwater; attempts to use improper equipment, methods or materials to install a well that cannot be properly constructed without different equipment, methods or materials; and an inability to identify and rectify problems that occur due to a deficiency in one of the five items listed above.

- (12) What are other qualities of the profession or occupation that distinguish it from ordinary labor?

See the reposes to item (11) and (15).

- (13) Will certification requirements cover all practicing members of the occupation or profession? If any practitioners will be exempt, what is the rationale for the exemption?

Certification requirements will apply to anyone in the trade or business of well contracting except as follows:

- (1) An individual who performs labor or services for, and under the supervision of, a certified contractor; and
- (2) An Individual who construct wells on land that is owned or leased by that individual;

- 14) What is the approximate number of persons who will be regulated and the number of persons who are likely to utilize the services of the occupation or profession?

More than 50% of the citizens of North Carolina rely on groundwater for their drinking water supply. Each of these must have a safe, reliable water supply well. Each citizen relying on an improperly constructed water supply well runs the risk of groundwater contamination and the associated health risks. As new wells are constructed by uncertified and potentially unqualified people, additional citizens are exposed to potential health risk. At the end of the 1996 registration period there were 565 registered well contractors.

Well Contractors are required to notify the DEHNR whenever a new well is drilled. The following shows the number of new wells (and thus the approximate number of persons who have utilized well contractor services for those wells) drilled over the last four years in North Carolina:

1992	7,394 new wells
1993	7,412 new wells
1994	7,289 new wells
1995	7,124 new wells

- 15) What kind of knowledge or experience does the public need to be able to evaluate the services offered by the occupation or profession?

The proper construction and repair of drinking water supply wells require specialized skills the ordinary homeowner cannot obtain. In addition, some of these activities require specialized equipment and technical expertise to operate that equipment. (NOTE: the capital expense involved with acquiring many drilling rigs and accessory equipment can exceed \$100,000. Such an investment is not financially reasonable for most homeowners.) Since the final product (i.e. the well) that is delivered is mostly underground and largely unavailable

for inspection without specialized knowledge and testing equipment, the public must accept the word of the well contractor that the well has been installed in a safe and legal fashion. Given this situation, the public should be able to be confident that the well contractor has been evaluated for, and been certified as having, the requisite training and experience to provide them with a dependable, safe water supply well system that meets applicable industry standards and state rules.

- 16) Does the occupational group have an established code of ethics, a voluntary certification program, or other measures to ensure a minimum quality of service?

Two associations exist for well contractors. These are the North Carolina Groundwater Association (NCGA) and the National Water Well Association (NWWA). Membership in both organizations is voluntary and only a percentage of practicing well contractors join. Approximately 35% of the registered well contractors in North Carolina are members of the North Carolina Groundwater Association. Both the NCGA and the NWWA have a voluntary code of ethics, and the NWWA currently maintains a voluntary but limited certification program.

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